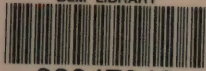


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Form 1221-2
(June 1969)



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MANUAL TRANSMITTAL SHEET

Release

1-1424

Date

8/8/85

Subject

H-1742-1 - EMERGENCY FIRE REHABILITATION

1. Explanation of Material Transmitted: This Handbook provides procedural direction, standards, and practices for the protection and emergency rehabilitation of the resources that could be lost or damaged following wildfire.
2. Reports Required: None.
3. Material Superseeded: None.
4. Filing Instructions: File as directed below, immediately following the Manual Section material.

REMOVE

None

INSERT

H-1742-1

(Total: 14 Sheets)

Guy E. Baier
Deputy Director, Lands and Renewable
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H-1742-1 - EMERGENCY FIRE REHABILITATION

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I. Introduction. Personnel from Field Offices and various interest groups have expressed concern about the amount of time required to begin emergency rehabilitation treatments after a wildfire has been controlled. This Handbook describes the process to be used to develop a Normal Fire Rehabilitation Plan (NFRP) based on past fire occurrence, potential damage to resource values, land-use planning objectives, decisions, and available resource data so emergency treatments can begin as soon as the fire has been controlled.

The development of the NFRP is at the discretion of the State Director and will normally be prepared for an entire District prior to the fire season. The Plan will identify those areas that are likely to burn and where emergency rehabilitation treatments will be required to ensure protection of life and property and the prevention of damage to soils and vegetation resources.

An Emergency Fire Rehabilitation (EFR) Plan will be developed for burn areas that are not covered by an NFRP if emergency rehabilitation treatments are required. The Plan will be initiated after the fire has been controlled. The Handbook describes the information required to develop the Plan.

II. Coordination.

A. Coordination with Inventory Data. Available fire occurrence information, resource inventory data, and land-use planning objectives will be used to provide the parameters necessary to develop an NFRP. It is particularly helpful to review information based on fire history, fire management planning designations, past EFR treatments, watershed conditions, soil and range site descriptions, vegetation composition, areas of cultural concern, wilderness and wilderness study areas, areas of critical environmental concern, erosion hazards, and threatened and/or endangered species habitat.

B. Interdisciplinary Coordination. An interdisciplinary team will determine the treatments to be included in the NFRP and prepare the accompanying environmental assessment. The team will determine both the on-and off-site resource damages that are likely to occur and prescribe the measures necessary to minimize the potential resource losses following a wildfire. An economic analysis will be prepared to determine the cost effectiveness of the proposed treatments.

C. Consultation. Consultation with resource users, other resource management agencies, academia, and other private and public interests is necessary to prepare an effective NFRP. Such consultation must be a continuous process during the preparation and implementation of NFRP's.

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III. Standards and Practices for Use of Emergency Funds. The use of emergency funds for fire rehabilitation is subject to the following standards and practices.

A. Protection. The need for emergency rehabilitation to protect soil, water, vegetation resources, or to prevent unacceptable on-site or off-site damages must be justified.

B. Timeliness. EFR treatments must be installed, to the extent possible, before damage-causing storms.

C. Specifications. All treatment measures must be designed to comply with applicable Bureau policy and standards. For example, construction of erosion control projects must be designed according to standard specifications governing such projects.

D. Control of Grazing. Rehabilitated areas will be covered by a plan for grazing and must be closed to grazing for at least two growing seasons. Exceptions must be justified on a case-by-case basis. Permanent and/or temporary fences may be required.

E. Tetrazolium Test. A tetrazolium chemical test should be conducted on the burned areas to estimate the percentage of live plant crowns and viable seed, if the presence of living plant materials is not apparent. The results of the test can be used to help determine if seeding is necessary (see Appendix 1 for test procedure).

F. Seed Test. All seed used for EFR treatments will be subject to State seed laws and will be tested for purity and germination.

G. Seed Costs. Each species of seed that costs more than \$5 per pound will require justification for approval by the State Director.

H. Wilderness. The EFR treatments in wilderness study areas must be carried out in a manner that will not impair wilderness values in accordance with the Interim Management Policy and Guidelines for Lands under Wilderness Review. In designated wilderness areas, treatments must be by primitive means (i.e., without the use of mechanical equipment) unless no other alternative exists. (See Manual 8560.)

I. Areas of Limited Suppression. The EFR funds will not be expended in a limited suppression area unless a site-specific justification is prepared and approved by the State Director.

J. Equipment. The EFR funds will not be used to purchase capitalized or noncapitalized equipment.

K. Wild Horses and Burros. Wild horses or burros may be excluded through fencing or by removal from the area.

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L. Wildlife. Most wildlife population control programs are the responsibility of the State Wildlife Agency. If wildlife use is a threat to the success of an EFR project, an agreement will be developed between BLM and the State agency as to how the wildlife numbers will be regulated prior to implementing the treatment.

M. Area of Critical Environmental Concern (ACEC), Outstanding Natural Area (ONA), and Research Natural Areas (RNA's). EFR treatments must be consistent with objectives for areas of critical environmental concern, outstanding natural areas, and research natural areas.

N. Threatened or Endangered Species. Implementation of EFR treatments must be coordinated with the U.S. Fish and Wildlife Service when federally listed threatened or endangered plants and animals are involved to ensure compliance with Section 7 of the Endangered Species Act. A similar process is recommended for State agencies when State-listed species are involved.

O. Seeding. Seeding as an EFR practice may be considered when the natural regeneration will not establish sufficient cover in time to protect the site from unacceptable erosion or the vegetation that will be established is not acceptable. Seed should be drilled or covered by dragging a chain, harrow, or other method, as appropriate.

P. Browse. Browse seed may not be purchased with fire rehabilitation funds when the average annual precipitation is less than 12 inches, unless an adequate justification is prepared and approved by the State Director. The 12-inch precipitation standard does not apply to four-wing salt-bush which is adaptable to sites with a minimum annual precipitation rate of 8 inches. Browse seed purchased with other funds may be included in the mixture being seeded for EFR purposes.

Q. Forested Lands. Burns on fragile slopes and in high precipitation zones, where the majority of the vegetation has been killed, will be seeded with annuals, forbs, and/or grass after the burn. Generally, reforestation of the land will be funded with Forest Management and Development Funds.

R. Seed Mixture. A seed mixture for fire rehabilitation purposes may be supplemented to meet other resource objectives. In these cases, the additional cost will be paid by the benefitting activities.

S. Management. If a seeding for EFR purposes is necessary, it should be as intensively managed as any other range improvement.

T. Cultural Clearance. A cultural resource clearance is required before EFR treatments that cause soil disturbance can be implemented.

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IV. Available Information. The type of treatments to be included in the NFRP should be determined by the susceptibility of the soil to erosion, soil productivity, existing and potential vegetation cover, resource capability, precipitation, success of previous rehabilitation treatments, and the other resource values and uses of the area. This information is important to determine the most suitable and cost-effective treatment for each area.

The following resource information, if available, will be reviewed prior to the preparation of an NFRP and is normally available from existing resource inventories, studies, and plans.

A. Erosion Susceptibility Classes. These are potential erosion classes and existing watershed conditions within the NFRP area. (See BLM Manual 7317.)

B. Soils. The soil survey will provide information as to the capability of the soil to support the proposed rehabilitation practices. (See Manual 7161 and the Soil Conservation Service National Soils Handbook, 430-VI-NSH, July 1983.)

C. Special Area Designations. These are maps or overlays that delineate areas of critical environmental concern; areas of limited suppression; threatened, endangered, and sensitive species habitat; planned prescribed burns, wilderness, and wilderness study areas; and other important uses or designations that would affect rehabilitation practices.

D. Vegetation. Information on the existing vegetation and the site potential (ecological site) will help determine if emergency rehabilitation is necessary and the potential for success, particularly for these treatments involving seeding practices. Generally, sites supporting at least 20 percent perennial herbaceous vegetation will recover to provide adequate soil protection and stability within 1 or 2 years following a burn. The effects of fire on some important plants are provided in Appendix 2.

Other sites, usually those supporting annual vegetation such as cheatgrass, may provide adequate protection from erosion in years with normal precipitation but continue to be a high fire hazard and may require emergency rehabilitation. Fire-tolerant species could be seeded to provide a vegetative fuel-break system in areas of annual vegetation following wildfire.

E. Climatological Data. Weather conditions, especially temperature, precipitation, and wind, determine to a large extent the success or failure of emergency rehabilitation treatments.

F. Value-at-Risk. The value-at-risk determination information may be used for predetermining the kinds and degree of treatment that will be necessary if a fire should occur. (See Manual 9211.22C.)

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V. Components of an NFRP. The NFRP will include the following information:

A. Map. Prepare a map or overlay showing the District's previous 10 year fire occurrence by size of burn (see Manual 9211.2). Identify proposed rehabilitation areas on the map or overlay. Determine the areas in the District to be included on the map or on an overlay by answering the following questions:

Step 1. Do wildfires occur frequently and are they of significant severity to be considered for rehabilitation?

Yes

Proceed to Step 2.

No

No further consideration at this time. If a wildfire occurs and rehabilitation is necessary, an Emergency Fire Rehabilitation Plan will be prepared.

Step 2. Are soils susceptible to significant wind erosion following wildfire? Is there a potential for off-site damages or eventual dominance by highly flammable annual species, i.e., cheatgrass?

Yes

The NFRP will be developed for the acreages that are susceptible to erosion or off-site damages and/or where the need to establish a vegetative fuel break system has been identified.

No

No further consideration at this time. If a wildfire occurs and rehabilitation is necessary, an Emergency Fire Rehabilitation Plan will be prepared.

Step 3. Analyze past fire effects on existing plant communities. Is the vegetation that will become established following wildfire acceptable?

Yes

Develop the needed management prescription.

No

Develop the seeding, treatment and management actions that must be implemented to establish a vegetative fuel break system.

B. Environmental Assessment. The Environmental Assessment will be prepared in accordance with instructions in the Departmental Manual. (See Part 516 DM 1-7, Release 2244.) The assessment should include:

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1. A brief discussion of the applicable land-use planning objectives and decisions. Emergency treatments identified in the NFRP must be consistent with land-use planning objectives and decisions.

2. A discussion on how the proposed rehabilitation treatments would meet the land-use planning objectives. Include a specific discussion on the selection of plant species to be included in seed mixtures.

3. A table summarizing the proposed rehabilitation treatments. As a minimum, the table should include the total acres within the treatment area; the total acreage treated during the past 10 years; the proposed seed mixture, equipment, labor, materials; and a cost estimate for each type of treatment.

4. Summary of consultation and coordination.

C. Decision. A Finding of No Significant Impact (FONSI) or Record of Decision.

D. Economic Analysis. An economic analysis is required if the proposed EFR expenditure exceeds \$50,000.

E. Approval. Approval by State Director.

F. Procurement. Advance procurement actions to be taken.

VI. Special Consideration for Fire Suppression. The Area Manager may assign a resource advisor to the fire team to provide information concerning resource values and to determine the need for emergency rehabilitation. Damaged improvements or resources caused by suppression actions may be repaired or restored using emergency fire funds (4620). This work should be completed prior to final demobilization of the suppression forces. If it is not possible to obtain equipment before demobilization, emergency treatments must be initiated within 10 days of the demobilization of the fire if 4620 funds are to be used.

A. Remedy Actions. Actions to remedy suppression-caused damages may include, but are not limited to:

1. Replacement of vegetation and other material on the fireline.
2. Construction of water bars along the fire breaks.
3. Repair of all improvements damaged by suppression action.
4. Restoration of fire camp areas and roads.

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VII. Post-Burn Activities. The manager will initiate a burned area survey if emergency rehabilitation is required. The survey will be conducted by an interdisciplinary team and an NFRP Supplement will be prepared. The Supplement includes description of the specific EFR treatments to be completed on the burn and a Burned Area Report, Form 1742-1 (see Illustration 1). Specific rehabilitation actions may be taken without further approval if they are within the guidelines of the approved NFRP. Request for treatments not covered in the NFRP must be submitted to the State Director for approval. An addendum to the environmental assessment may be required if all of the proposed treatments have not been analyzed.

VIII. Emergency Fire Rehabilitation Plan. A site-specific Emergency Fire Rehabilitation Plan will be prepared for each burn that is not covered by an NFRP when emergency rehabilitation is required. The plan is subject to the same standards and practices required to implement an NFRP. The plan will include the following:

- A. Map. A map showing the emergency treatment projects.
- B. Environmental Assessment. An environmental assessment that is site specific.
- C. Decision. A FONSI or Record of Decision.
- D. Report. A Burned Area Report, Form 1742-1.
- E. Economic Analysis. An economic analysis is required if the expenditure exceeds \$50,000.
- F. Approval of State Director. Approval of the FRP by the State Director.

IX. Economic Analysis. An EFR request exceeding \$50,000 must include an economic analysis. After the Burned Area Survey team has developed alternatives to achieve stated objectives and meet the EFR policy, a cost-effectiveness analysis will be performed to identify the least cost alternative. If alternatives were developed correctly, the least costly alternative will minimally satisfy the EFR objectives. If the preferred alternative is not the least costly one, a justification, including the rationale for not selecting the least costly alternative, must be prepared and submitted. This justification must include the economic or cost-benefit analysis information by the SageRam Investment Analysis Computer Program (see H-1743-1).

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Economic information is required in Sections D-7 and D-7a of The Burned Area Report (Form 1742-1). Use the dollar values from the intermediate interest (discount) rate line under "Efficiency Test Results" from page four of the SageRam printout (detailed results). If they are not the same, data for both the least-costly and preferred alternative is required. A copy of the four-page detailed results may be submitted in lieu of completing Section H, parts of Section G, and other sections, if the SageRam printout contains the requested information.

X. Obligation of Funds. Funds are obligated against the emergency fire rehabilitation subactivity and proper program element, project numbers, and sub-object class as directed in the BLM Fund Coding Handbook (H-1684-1). In all cases, the project number to be used is the same as the wildfire project number assigned during the suppression effort.

Emergency funds can be obligated only in the fiscal year for which they are appropriated. Therefore, it is important that every effort be made to obligate funds and accomplish force account work in that fiscal year.

XI. Team Funding. When it is decided to convene a burn area survey team, District Managers may contact their State Director and request up to 2 workmonths of immediate funding to finance the survey effort. If pre-funding for the survey team and the final recommendation is a No Action Alternative, an EFR package must be submitted with AWP forms so documentation of prefunded workmonths can be made. Non-District survey team members that have to travel to the fire site will charge to the Fire Rehabilitation subactivity and the assigned project number.

XII. NFRP Implementations. A District with an approved NFRP can begin rehabilitation of burned areas when the fire has been controlled. Rehabilitation projects that require obligation of \$30,000 or more will be reported to the Headquarters Budget Office (WO-161) for approval prior to obligation. Information for EFR treatments will be entered on the Rex Computer Program operated by Headquarters Budget Office (WO-161). The authority to obligate funds may be temporarily withdrawn from State Directors by the Bureau's Chief, Office of Budget, when all emergency fire rehabilitation funds allocated by Congress have been committed.

H-1742-1 - EMERGENCY FIRE REHABILITATION

XIII. Procurement for Services and Supplies. A procurement strategy for obtaining services and support will be developed following approval of the NFRP by the State Director. The strategy will be based on the information developed in the NFRP and is to be coordinated between resource and procurement personnel in the District and the State Office. A Basic Ordering Agreement (BOA) or Requirements Contract may be developed if similar rehabilitation treatments are required in the same geographic area year-after-year. They may be used to expedite contracting for uncertain requirements when specific items, quantities, and process are not known at the time the agreement is executed. Any individual contract requirement expected to exceed \$25,000 will be submitted to the Denver Service Center for procurement.

If an NFRP has not been developed or the information in the NFRP indicates rehabilitation requirements are sporadic, a plan may still be developed to expedite the required emergency rehabilitation. The strategy should be developed in cooperation with the State Office.

Information required by procurement personnel to expedite service and supply contracts is found in Appendix 3.

XIV. Project Completion. Accomplishments are reported on Job Documentation Report, Form 1732-1 (see Illustration 2) within 30 days following the completion of planned and funded work (see Data Management for Job Documentation Reports, BLM Technical Note 356).

XV. Monitoring. Monitoring studies will be established to determine the effectiveness of the emergency rehabilitation treatments. Priority should be given to those areas where unique treatments were implemented or where resource values and public concern are high. The studies will be continued for a minimum of three growing seasons after the treatment. BLM Technical Reference 4400-1, Planning for Monitoring, April 1984, contains applicable guidance for planning monitoring studies associated with emergency rehabilitation treatments.

XVI. Evaluation. The evaluation of EFR monitoring data will provide a basis to make decisions about future treatments. The evaluation should indicate if the objectives for the plan have been reached or if and how much progress is being made toward the objectives.

The entire EFR program for the BLM, a particular State or District, will be evaluated for compliance with BLM policy through the program evaluations, or by a special evaluation (see H-1242-1).

H-1742-1 - EMERGENCY FIRE REHABILITATION

Form 1742-1
(September 1978)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BURNED AREA REPORT

Date of report
7/31/84

SECTION A - IDENTIFICATION

1. Fire name and Number (see Form DI 1201) Moss M043		2. Effected State (O R)	3. County (0 3 7)
4. Administrating State (O R)	5. Congressional District (0 2)	6. District (0 1)	
7. DATE Started 7/26/84 Controlled 7/28/84		8. Estimated supression cost \$ 130,000	
9. Fire supression damages repaired with 4620 funds Firelines waterbarred (miles) 5 Firelines seeded (acres) 6			
10. Fuel type fire intensity (nearest 10 percent) 20 Light, 40 Moderate, 40 Extreme			

SECTION B - PROBLEM INVENTORY

1. Watershed (number) 17 West Sayler Creek	2. Public acres burned 103,046	3. Water repellent soil area burned (percent) 0
4. Specify vegetation subtypes (nearest 10 percent) Wyoming Big Sage/Cheatgrass 80%; Wyoming Big Sage/Greasewood 20%.		
5. Geologic types Volcanic Derived Alluvium		
6. Soil surface factor 40	7. Erosion potential cu-yds./sq.mi. 3,200	8. Storm peak potential cu.ft./sec./sq.mi.
9. Stream channels by order or classes (miles) 1.5	10. Public land roads (miles) 6	

SECTION C - CLIMATIC DATA

1. Annual precipitation (inches) 10	2. Design storm rainfall during 6 hour period .65 inches 2 yr. frequency 1.0 inches 10 yr. frequency
3. Annual runoff (nearest 10th) 0.5 inches	4. Maximum 30 minute intensity storm .43 inches 2 yr. frequency .69 inches 10 yr. frequency

SECTION D - SUMMARY OF SURVEY AND ANALYSIS

1. Skills represented on team (check appropriate blocks) <input type="checkbox"/> Wildlife <input checked="" type="checkbox"/> Fire management <input type="checkbox"/> Engineering <input checked="" type="checkbox"/> Contracting <input type="checkbox"/> Local management <input type="checkbox"/> Research <input type="checkbox"/> Other <input type="checkbox"/> Hydrology <input checked="" type="checkbox"/> Soils <input checked="" type="checkbox"/> Geology <input checked="" type="checkbox"/> Range <input type="checkbox"/> Timber			
2. Emergency (describe) Classified as the Hart Soil Series. Runoff is rapid and erosion is severe when vegetative cover is absent. Larkspur is expected to become more abundant and livestock losses are anticipated. 1.5 miles of irrigation canal may be silted.			
3. Emergency rehabilitation objectives (see BLM Manual Section 7441) 1. Stabilize soil, 2. Slow overland flow, 3. Provide vegetative cover, 4. Reduce future fire danger, 5. Reduce poisonous plants, and 6. Protect irrigation canal.			
4. Probability of completing treatment prior to first major damage-producing storm (nearest 10 percent) <input checked="" type="checkbox"/> Land 90, <input checked="" type="checkbox"/> Channel 80, <input type="checkbox"/> Roads, <input type="checkbox"/> Other			
5. Net non-market quality benefit index <input checked="" type="checkbox"/> Significant <input type="checkbox"/> Not significant		6. Net social wellbeing benefit index <input checked="" type="checkbox"/> Significant <input type="checkbox"/> Not significant	
7. B/C Ratio .34:1	7a. Net Benefits (B-C) -310,712		8. Cost effectiveness index (check one) <input type="checkbox"/> I <input type="checkbox"/> II <input checked="" type="checkbox"/> III <input type="checkbox"/> IV

H-1742-1 - EMERGENCY FIRE REHABILITATION

SECTION E - ON-SITE AND OFF-SITE DEVELOPMENTS		
DEVELOPMENTS	UNITS (Number)	ESTIMATED VALUE (Dollars)
Community and urban development (<i>people</i>)		\$
Municipal and domestic water supply (<i>people served</i>)		
Transportation systems (<i>miles</i>)		
Water distribution systems (<i>irrigation</i>) (<i>miles</i>)	6	30,000
Agricultural development (<i>crops, facilities</i>) (<i>acres</i>)	1.5	2,000
Industrial development (<i>dams, power, manufacturing</i>) (<i>number</i>)		
Power and communication lines (<i>miles</i>)		
Recreation development (<i>PAOT</i>)		
Fish habitat		
Other (<i>specify</i>)		
TOTAL HAZARD POTENTIAL		\$ 32,000

SECTION F - EMERGENCY REHABILITATION NEEDS					
LAND OWNERSHIP	ACRES BURNED	LAND (Acres)	REHABILITATION MILES		OTHER (Units)
			CHANNEL	ROAD	
FEDERAL					
Public lands	103,046	52,620			Fence-5 miles Pipeline-15miles
Other (<i>Name</i>)					
Military (Exclusive)	3,640				
Military (Buffer)	26,172				
SUBTOTAL	132,858				
NON-FEDERAL					
State and County	6,600				
Private	3,720				
Indian					
Other					
SUBTOTAL	10,320				
TOTAL	143,178				

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SECTION G - ELIGIBLE EMERGENCY REHABILITATION MEASURES
OR TREATMENTS AND SOURCE OF FUNDS

TREATMENT (1)	UNITS (2)	UNIT COST (3)	PUBLIC LANDS			OTHER LANDS		TOTAL DOLLARS ALL LAND (9)
			NUMBER OF UNITS (4)	4630 DOLLARS (5)	OTHER DOLLARS (Name) (6)	NUMBER OF UNITS (7)	NON-FED. DOLLARS (Name) (8)	
Seeding Drill	Acres	5.50	52,620	\$ 289,410	\$		\$	\$
Seed Cost	Acres	4.90	52,620	257,838				
Labor	Work Months	3,400	62	210,800				
Seed Mixing	Lbs.	.03	420,960	12,630				
CHANNELS (Miles)								
Opening water course								
Stabilizing streambanks								
Fence (Repair)	Miles	200	1	200				
Fence (Construction)	Miles	2,800	11	30,800				
ROADS (Miles)								
Ditch cleaning								
Maintenance								
MAJOR STRUCTURES (Each)								
TOTAL				\$ 801,678	\$		\$	\$

H-1742-1 - EMERGENCY FIRE REHABILITATION

SECTION H - EXAMINING IMPACTS OF MANAGEMENT ALTERNATIVES
FOR AN EMERGENCY PROGRAM

Economic benefits summary with interest rate (percent)

ECONOMIC CRITERIA	UNITS OF MEASURE	WITHOUT TREATMENT		WITH TREATMENT		DIFFERENCE IN PRESENT VALUE
		NUMBER OF UNITS	PRESENT VALUE	NUMBER OF UNITS	PRESENT VALUE	
Sedimentation Impacts						
Downstream storage	Miles	-1.5	\$ 0	1.5	\$ 2,000	\$ 2,000
Sediment removal						
Fish habitat						
Water quality						
Flood Water Damage						
Land						
Property						
Other	AUM's	6630	39,780	18,088	108,528	78,748
DOLLARS			\$ 39,780		\$ 110,528	\$ 80,748

SECTION I - QUALITATIVE BENEFIT INDEX

NON-MARKET VALUE CRITERIA	WEIGHT FACTOR	WITHOUT TREATMENT		WITH TREATMENT		DIFFERENCE	
		ACTUAL	WEIGHTED	ACTUAL	WEIGHTED	ACTUAL	WEIGHTED
Erosion and sediment	8	2	16	0	0	2	16
Aesthetic land quality	3	1	3	0	0	1	3
Water quality	4	2	8	0	0	2	8
Ecological benefits	3	0	0	3	9	-3	-9
Fish and wildlife habitat	2	1	2	1	2	0	0
Other							
TOTAL	20		29		11		18
Average weighted index			1.45		.55		.9
Net non-market benefit index							

SECTION J - SOCIAL WELLBEING BENEFIT INDEX

SOCIAL CRITERIA	WEIGHT FACTOR	WITHOUT TREATMENT		WITH TREATMENT		DIFFERENCE	
		ACTUAL	WEIGHTED	ACTUAL	WEIGHTED	ACTUAL	WEIGHTED
Life, health, safety	10	2	20	0	0	2	20
Employment	4	0	0	1	4	-1	-4
Recreational opportunity	2	1	2	0	0	1	2
Economic stability	4	2	8	0	0	2	8
Income distribution	6	2	12	1	6	1	6
Preserve special sites	2	0	0	0	0	0	0
Other							
TOTAL	28		42		10		32
Average weighted index			1.5		.36		1.14
Net social wellbeing benefit index							1.14

District Manager (Signature)

Bill Project

Date

8/2/84

State Director (Signature)

Owen Approve

Date

8/16/84

H-1742-1 - EMERGENCY FIRE REHABILITATION

GENERAL INSTRUCTIONS

1. District Manager prepares one copy for summarization of the burned area survey data for 4630 subactivity if the determination has been made for an Emergency Fire Rehabilitation (EFR) plan. Revised copy is prepared if measures are needed that differ from those already approved.
2. District Manager submits one copy for review and approval to State Director.

SPECIFIC INSTRUCTIONS

(Items not listed are self-explanatory)

Section B - PROBLEM INVENTORY

Item

1. Watershed Number - If more than one watershed, enter number of others in parentheses.
7. Erosion Potential - Select the storm duration from Items 2 and 4 in Section C - Climatic Data which maximized erosion rate.
8. Storm Peak Potential - Enter in cubic feet per second per square mile to nearest 10 cu. ft/sec/sq mile. Calculate in accordance with Manual Section 7315, using design storm rainfall from Section C - Climatic Data Item 2. Adoption of other than 10-year storm frequency may be used appropriately. However, Item 8 of this Section and Items 2 and 4 of Section C are to have identical storm frequencies.

Section C - CLIMATIC DATA (See United States Weather Bureau technical paper 40 for Items 2 and 4.)

Section D - SUMMARY OF SURVEY AND ANALYSIS

6. Net social wellbeing benefit index - (See BLM Manual Section 9522.)
7. 7a B/C Ratio and Net Benefits (B-C) Analysis Computer Program (see H-1743-1).

Section E - ON-SITE AND OFF-SITE DEVELOPMENTS (Do not include value of resources damaged or destroyed by fire on Form DI-1201.)

Section G - ELIGIBLE EMERGENCY REHABILITATION MEASURES OR TREATMENTS AND SOURCE OF FUNDS (Emergency rehabilitation is work done promptly following a wildfire and is not to solve watershed problems that existed prior to the wildfire.)

Column

(1) Treatment - Enter the rehabilitation treatments recommended by the burned area survey team, and their estimated cost.

Road - Enter the cost of maintenance scheduled for roads in burned area in the Annual Maintenance Program in Column 6 "Other Dollars." Enter the cost for other essential Drainage Activities made necessary only because of the wildfire, in Column 5 "4630 Dollars (Fund)."

Major Structures - Enter emergency structures justified in Activity Plan.

Section H - EXAMINING IMPACTS OF MANAGEMENT ALTERNATIVES FOR AN EMERGENCY PROGRAM

Enter interest rate by percent for current Fiscal Year issued annually by Water Resource Council.

Section I - QUALITATIVE BENEFIT INDEX (See Manual Section 9522.)

Section J - SOCIAL WELLBEING BENEFIT INDEX (See Manual Section 9522.)

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U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT				JOB IDENTIFICATION			
JOB DOCUMENTATION REPORT				III - JOB DETAILS AND BENEFITS			
I - GENERAL DESCRIPTION Card 1				Card 3			
5. Job Name (11-30) SAYER CREEK SEEDING				1. State (2-3) OR 2. District (4-5) 01			
LOCATION CODES				3. Job Number (6-9) 4391			
6. Special Project Code (31-34) 4805				4. Transaction Code (10) 2			
8. Subregion (39-42) 11601 9. County (43-45) 013				37. Primary Job Objective (11) 1			
10. Watershed Area Number (46-48) 013				PLANT AND PEST CONTROL			
11. Allotment Number (49-52) 0706				39. Chemical (12) <input type="checkbox"/> 42. Method (13) <input type="checkbox"/>			
12. Wildlife Habitat Area (53-56) <input type="checkbox"/>				45. Mechanical - Method (14) <input type="checkbox"/>			
13. Wild Horse/Burro Area Number (57-60) <input type="checkbox"/>				ARTIFICIAL REVEGETATION			
14. Meridian (61-62) 08				47. Pounds Seed/Acre (15-17) 800			
15. Township (63-67) 00205				48. Seedlings/Acre (18-21) <input type="checkbox"/>			
16. Range (68-72) 0230E 17. Section (73-74) 10				49. Method (22) 1			
18. Subdivision (75-78) NESW				51. AUM's Livestock Forage Added (23-26) 1206			
SITE AND VEGETATION DESCRIPTION				52. Future SSF (27-28) 20			
19. Present SSF (79-80) 38				WATERSHED TILLAGE			
20. Percent Slope (81-82) 02				54. Method (29) <input type="checkbox"/>			
21. Exposure (83) 3 22. Soil Texture (84) 4				FACILITIES			
23. Precipitation (inches) (85-86) 10				55. Type (30) <input type="checkbox"/> 56. Other Misc. (31) <input type="checkbox"/>			
24. Elevation (feet) (87-91) 04500				WATER DEVELOPMENT/CONTROL			
25. Vegetation Subtype (92-94) 901				59. Type (32-33) <input type="checkbox"/>			
COMPOSITION (Percent)				60. Water Filing Number (34-39) <input type="checkbox"/>			
26. Grasses (95-96) 44 27. Forbs (97-98) 12				STORAGE (Ac. Ft.) 61. Flood (40-45) <input type="checkbox"/>			
28. Browse (99-100) 44				62. Silt (46-51) <input type="checkbox"/>			
COVER (Percent)				WILDLIFE HABITAT DEVELOPMENT/PROTECTION			
29. Vegetation (101-102) 20 30. Litter (103-104) 48				63. Type (52-53) 21			
31. Bare Ground (105-106) 32				64. Primary Species (54-56) 111			
II - ANNUAL WORK PLAN INPUT DATA Card 2				65. Animal Months (57-61) 240			
75. Subactivity (11-14) 4630				66. Number Increase (62-66) 60			
76. Component-Job Code (15-18) 5355				67. Pounds Fish Increase (67-71) <input type="checkbox"/>			
UNITS PLANNED				68. Rare/Endangered (72) <input type="checkbox"/>			
77. Primary (19-24) 5262000				VISITOR DAYS ADDED			
78. Secondary (25-29) AGCR				69. Fisherman (73-76) <input type="checkbox"/>			
TIME OF AWARD				70. Hunter (77-80) <input type="checkbox"/>			
79. Fiscal Year (30-31) 84 80. Third (32) 1				71. Other (81-84) <input type="checkbox"/>			
TIME OF COMPLETION				IV - PROGRESS REPORT Card 4			
81. Fiscal Year (33-34) 84 82. Third (35) 2				COMPLETION DATA			
BLM COST				90. Primary (11-16) 5295000			
83. Method (36) 1				91. Secondary (17-21) AGCR			
84. Material (37-41) 4030				TIME 92. Fiscal Year (22-23) 84			
85. Contract (42-47) 14400				93. Third (24) 2			
CONTRIBUTED COST				94. Job Cost (25-30) 147680			
86. Material (48-52) <input type="checkbox"/>				95. Work-Months (31-33) 6200			
87. Labor/Equipment (53-57) <input type="checkbox"/>				CONTRIBUTION DETAIL			
MAINTENANCE				96. Agreement (34) <input type="checkbox"/> 97. Contributor (35) <input type="checkbox"/>			
88. Responsibility (58) <input type="checkbox"/> 89. Cycle (59-61) 105				98. Contributor's Name (36-55) <input type="checkbox"/>			
V - DETAIL OF UNITS AND COSTS <input type="checkbox"/> ESTIMATE <input type="checkbox"/> ACTUAL				CONTRIBUTIONS			
WORK DESCRIPTION AND MATERIALS (a)		UNITS		BLM COSTS		COOPERATOR COSTS	
		EA.MILE,ETC. (b)	COST (c)	MATERIALS (d)	CONTRACT (e)	MATERIALS (f)	LABOR (g)
Seeding - Drill Seed - Crested Wheatgrass		61WM 43,000lbs.	3200 5.00	215,000			
TOTALS Materials				215,000			
Labor/Equipment							

Form 1732-1 (August 1981)

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Determining Recovery Potential of Burned Plants Following Range Fire

Range recovery potential must be evaluated objectively following a wildfire. A technique for quickly determining whether the plants of a burned area are dead or alive is available. The emergency nature of needed treatment of 10 requires completing the evaluation and analysis within a short time. The technique described is one additional tool for making such decision.

The material used is tetrazolium (2, 3, 5-triphenyl tetrazolium chloride), usually abbreviated as TZ. It is used as a rapid method of testing the potential viability and vigor of seeds. Seed-testing laboratories find the TZ test especially useful in evaluating seeds that otherwise require long or undetermined testing periods, such as those of many woody plants. Prepared seeds are soaked in a 1 percent solution of TZ. Testing is based on the principle that respiration processes within living tissues release hydrogen, which combines with the colorless tetrazolium solution and produces a red pigment. Depth of color normally is an indicator of the vigor of the tested tissue. Dead tissues remain unstained. Reuse of the solution is not recommended.

TZ can be used to detect live tissue in badly burned plants following rangeland fire. Stem bases of perennial grasses, for example, can easily be field tested with results becoming evident within a few hours. A simple procedure that has worked satisfactorily is as follows:

Collect the sample. A 1-inch section taken from the basal (growing point) area is sufficient.

Clean away excess chaff. Coarse stems may be slit. The TZ must contact living material to produce the reaction.

Place sample in suitable container (15 to 20 cc. glass or plastic vials are satisfactory for field use). Cover sample with TZ solution (1 percent).

Affix stopper and label. Place in dark.

Color changes of vigorous, live tissue may become apparent within a few hours. There is no need to wait longer than overnight before examining samples of woody tissue exposed to TZ. Warm temperatures (e.g., 100° F) speed action. Remove tissue from solution and examine under a low-power lens. Any pink color indicates some life. Much active respiration produces deeper red color. Further experience is needed with various species to improve accuracy of recovery predictions in local situations.

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Seeds found on or in the soil can be tested for viability, whether following fire, or in seedings where germination failures occur, and in the usual sampling of bulk seed. Procedures for seeds vary with species. In general, the seed sample is presoaked in water to soften for approximately 5 or 6 hours, then drained, and the seed coats removed or the seed cut transversely, avoiding the embryo. The prepared seeds are then placed in a 1 percent solution of TZ sufficient to cover. Simple field tests using the chemical tetrazolium to determine living plant tissue, both vegetative and seed, can reduce time of decisionmaking.

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Burn Effect on Vegetation Cover Criteria

Consider EFR seeding only if fire-hardy plants cannot reasonably be expected to provide soil and watershed protection within 2 years.

Normally, wheatgrasses will recover after a burn. Most needlegrasses and bluegrasses seem to recover well. Idaho fescue usually suffers high mortality from wildlife. If a good stand of wheatgrass was present before the burn, an adequate stand can be expected to recover, except in areas of dense vegetation where the intensity of heat was excessively high and plants were killed.

The following summary is compiled from various research done on the recovery of plant species following fire. Additions to this summary may be developed at the District level from experience or on designated areas requiring rehabilitation or restoration following wildfire.

After Fire Recovery Time for Range Grasses

<u>Grass Species</u>	<u>Recovery Time Following Fire (years)</u>
Bluebunch	1 - 3
Crested Wheatgrass	1 - 3
Neddle-and-thread	3 - 8
Prairie Junegrass	3 - 8
Idaho Fescue	12 - 30
Sandberg Bluegrass	1 - 2
Bottlebrush Squirreltail	1 - 2
Thickspike Wheatgrass	1 - 2
Plains Reedgrass	1 - 2
Other Wheatgrasses	1 - 3

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Susceptibility of Range Forbs to FireSeverely DamagedPussytoes - Antennaria sp.Sanwort - Argemone sp.Flenban - Erigeron sp.Phlox - Phlox sp.Slightly DamagedLocoweed - Astragalus sp.Paintbrush - Castillejasp.Geranium - Geranium sp.Lupine - Lupine sp.Penstemon - Penstemon sp.

Globemallow -

Sphaeralcea sp.UndamagedYarrow - Achillea sp.Balsamroot - Balsamorhiza sp.Longleaf Phlox - Phlox longifoliaGroundsel - Sencio sp.Arnica - Arnica sp.Onion - Allium sp.Velvet Lupine - LupinuslencophyllusTumblemustard - Sisymbrium sp.Death camas - Zygadenus sp.Toadflax - Commandra sp.Extent of Fire Damage and After-Fire Recovery Time for Range Shrubs

<u>Shrub Species</u>	<u>Extent of Damage</u>	<u>Recovery Time Following Fire (years)</u>
Rabbitbrush	Slight	1 - 3
Horsebrush	Slight	1 - 3
Big Sagebrush	Severe	12 - 30
Antelope Bitterbrush	Severe	12 - 15
Service Berry	Severe	15+
Granite Galia	Severe	15+
Broom Snakeweed	Severe	15+
Mountain Snowberry	Severe	15+

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Procurement InformationServices

Service contracts include rangeland or grain drill seeding, chaining, and equipment rental with operator. Policy and procedures for service contracts are contained in Manual Section 1510 and Handbook H-1510-1. To reduce solicitation time, the following actions should be completed upon approval of the NFRP, as discussed at the planning meeting previously identified.

Request a Master Wage Determination of wage rates from the Department of Labor;
Establish Bidders Lists; and
Establish BOA's or Requirements Contracts if time will be critical.

Seeding

When developing a purchase request package, use standard BLM specifications, whenever possible. The purchase requisition must contain the following information for seedings with rangeland or grain drills:

Approximate acreage to be seeded;
Approximate starting date;
Number of days to complete the work;
Location of seed;
Kind of seed;
Rate of seed application per acre;
Average depth of seeding in inches;
How the measurement for payment will be made (i.e., field traverse, aerial photo, maps);
Work locations map; and
Estimated cost.

If rangeland drills are to be provided by the Government, furnish the following information:

Number of drills to be furnished;
Location of drills;
Location of spare parts; and
How many drills can be pulled by each unit.

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Aerial Seeding

For aerial seeding projects, specifications must include:

Approximate acreage to be seeded;
Approximate starting date;
Number of days to complete the work;
Location or seed;
Kind of seed;
Rate of seed application per acre;
Work locations map;
Landing facilities in or near job area;
Who will furnish a ground crew for handling seed and loading the aircraft;
Who will furnish the flagmen and flagging materials; and
Estimated cost.

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Also for aerial seeding, one of the following aircraft requirements must be specified:

Capable of applying seed at 100 MPH or less;
Fixed Wing only capable of applying seed at 100 MPH or less; or
Helicopter only.

Supply Contracts for Seed Purchases

When requirements for seed are known or after the planning meeting previously discussed is held, technical personnel should promptly send a purchase requisition to procurement personnel.

Seed must be purchased from mandatory Federal Supply Schedule (FSS) contractors if the species required is on contract. Normal processing time for buying and testing seed from FSS is 60 days. If the FSS cannot be used, open-market purchases of seeds can take 90 to 120 days.

Because of the leadtimes involved, it would be helpful if a limited supply of seed can be maintained using the stores account. Purchase requisitions for seed must include the following:

Common name;
Generic name;
Minimum percent of purity;
Minimum percent of germination;
Amount required;
Where seed is to be delivered;
When seed is to be delivered;
Source or area seed is to be collected from (optional); and
Estimated cost.

Some States have established consolidated seed warehouses. Depending on the location of the warehouse, it may serve more than one State. State Directors may consider the possibility of establishing additional seed warehouses. Preceding the fire season, seed will be purchased, based on the NFRP, in sufficient amounts and types to start rehabilitation projects. Additional seed must then be purchased to complete the project, or replace the seed used. Contact the State Office before making emergency purchases to see if seed is available from the seed warehouse or from another District or State Office.

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Supply Contract for Equipment Rental Without Operator

Equipment rental without operator is considered a supply contract and generally is not available on FSS contract. Leadtime for equipment rental is not as critical as for services and seed contracts. The purchase requisition must contain the following information at a minimum:

- Type of equipment needed;
- Capacity of equipment;
- Any special requirements (e.g., dual wheels, three point hitch, etc.);
- Unit of payment (e.g., hour, day, month, mile, etc.);
- Rental period;
- Where delivery will be made;
- Where pickup will be made; and
- Estimated cost per unit of payment.

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